DOCUMENT RESUME

ED 385 703 CE 069 582

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TITLE Administrative Structures for Distance Education.
INSTITUTION Commonwealth of Learning, Vancouver (British Columbia).; Commonwealth Secretariat, London (England).
REPORT NO ISBN-0-85092-379-4; ISBN-1-895369-10-X
PUB DATE Sep 91
NOTE 33p.
AVAILABLE FROM Commonwealth Secretariat Publications, Marlborough House, Pall Mall, London SW1Y 5HX, United Kingdom (5 British pounds surface, 6 British pounds airmail); Commonwealth of Learning, 1700-777 Dunsmuir Street, Box 10428, Vancouver, British Columbia V7Y 1K4, Canada ($10 Canadian surface, $13 Canadian airmail).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Administrative Organization; Adult Education; *Distance Education; Educational Administration; *Educational Finance; *Educational Planning; Financial Support; Foreign Countries; Material Development; Models; Program Administration; Program Costs; *Program Development; Program Implementation; Teaching Methods
IDENTIFIERS Canada; Great Britain

ABSTRACT

This book is designed to help people who want to know whether distance education is useful for them. It suggests what questions to ask in considering whether distance education makes sense in a particular context and examines the different ways in which it can be organized. Chapter 1 considers who it can teach, what it can be used for, and how well it works. Chapter 2 looks at the resources a new distance education program demands: financial support, staff, communication services, provision of face-to-face support, educational support from other schools and colleges and other parts of government, and political backing. Chapter 3 focuses on the services to be provided to students. It deals with the necessary functions of a distance teaching institution, teaching methods, the production of materials, the work of writers, students and tutors, and the award of credit. Chapter 4 addresses the choice of an organizational and administrative structure. Six organizational models are described and compared. Chapter 5 considers the cost of distance education, including fixed and variable costs, calculating a budget, comparison of costs with those of conventional education, and funding. Chapter 6 deals with planning: who should do the planning, what needs to be done in the planning phase, what staff is needed, what is left for the development phase, and how long it will take. Contains 11 references. (YLB)

CE

ED 385 703

THE COMMONWEALTH OF LEARNING
COMMONWEALTH SECRETARIAT

ADMINISTRATIVE STRUCTURES FOR DISTANCE EDUCATION

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ADMINISTRATIVE STRUCTURES FOR DISTANCE EDUCATION

by
Hilary Perraton
Education Programme
Commonwealth Secretariat

Published jointly by the Commonwealth Secretariat and
The Commonwealth of Learning

September 1991

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Printed by the Commonwealth Secretariat and published jointly by the Commonwealth Secretariat and The Commonwealth of Learning

May be purchased from
Commonwealth Secretariat Publications
Marlborough House
Pall Mall
London SW1Y 5HX
England

ISBN 0 85092 379 4

Price £5.00 (surface), £6.50 (airmail)

The Commonwealth of Learning
1700-777 Dunsmuir Street
Box 10428
Vancouver, B.C.
V7Y 1K4
Canada

ISBN 1 895369 10 X

Price Cdn$10 (surface), Cdn$13 (airmail)

Preface

The purpose of this book is to help anyone considering the use of distance education and trying to decide how it should be organised. The acclaimed success of the world's twenty-five open universities gives the impression that learning at a distance demands the establishment of an open university. But, in practice, there are many different ways in which governments, universities, or private bodies can teach students at a distance. Our aim is to explore and compare the options that may be available.

The idea for the book came from a meeting of specialists on distance education called by the Commonwealth Secretariat and held in Cambridge in 1985. Their much more significant finding was that it was worth looking harder at ways of promoting Commonwealth co-operation through distance education: a conclusion that led on to the establishment of The Commonwealth of Learning. Background work for The Commonwealth of Learning held up the production of this book but work done on their behalf has confirmed that there is a continuing interest in its theme.

We are glad to acknowledge permission to reproduce material in the book from Professor Fred Jevons (in box 2), Mr Greville Rumble (in boxes 1 and 6) and Professor Don Swift (in box 4). We are also grateful for comments on the book at draft stages from a number of members of staff of both the Commonwealth Secretariat and The Commonwealth of Learning and from Dr Anastasios Christodoulou, Dr Meshack Matshazi, Ms Louise Moran, Dr Ian Mugridge and Mr Greville Rumble. Responsibility for the contents of the book rests, however, with the author and it does not necessarily represent the views either of the Secretariat or of The Commonwealth of Learning.

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1: What is distance education and how does it work?

This book is to help people who want to know whether distance education is useful for them. It is neither a blueprint nor special pleading. Instead it suggests what questions to ask in considering whether distance education makes sense in a particular context, and examines the different ways in which it can be organised.

The argument of the book can be stated succinctly. Experience has shown that distance education can be used for various different purposes. In considering its use we can start by asking who it can teach, what it can be used for, and how well it works. At that stage you may decide that distance education is irrelevant to your needs and go no further. But if you do go on, the question changes subtly: chapters 2, 3 and 4 together ask, 'given that we may try distance education, how can we best make it succeed?', examining the resources needed for distance education and its working methods. Once we have devised an educational and administrative strategy, it is possible, in chapters 5 and 6, to examine what it will cost and how to move from plan to implementation.

We can define distance education as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner. In practice much distance education has used a combination of media – often print, in the form of correspondence courses, with broadcasts and with some face-to-face sessions. Thus it includes correspondence teaching, some of what has been labelled open learning and the activities of open universities. It has been used at most levels of education, and to teach many different subjects.

Distance-education programmes have used more than one medium in order to balance the advantages and drawbacks of each. Studying by correspondence alone can be a byword for boredom: radio or television broadcasts offer a stimulus and a sense of personal contact to the isolated student. If we can use face-to-face study along with print or broadcasts we can aim for the best of both worlds – the economies of mass production achieved through printing or broadcasting together with the humanity and individualism of personal contact.

Distance education, as defined here, is more than making broadcasts or publishing books. It necessarily involves feedback from the learner to the teacher. For centrally produced educational materials cannot meet the individual needs of every student. Some kind of individual contact is necessary if students and teachers alike are to assess how successful they have been and if the learner is to get individual help and support. It is necessary, too, whenever education is seen as a process in which learner and teacher are together asking questions; unless feedback 'is built into the system, the hidden curriculum of a distance-teaching system is that the educator already possesses all the knowledge relevant to the student, and the latter's knowledge and understanding is of no importance to the educator' (Perraton 1982, p.7).

The systematic use of teaching materials and methods in a variety of media has significant administrative consequences. The task of teaching, usually the responsibility of a single teacher in the classroom, is shared between various different parties whose work therefore needs to be carefully planned and articulated. A new division of educational labour brings new administrative challenges and these are the main theme of this book.

1.1 Who can it teach?

Distance education has been used for many different audiences. It has for many years offered an alternative route to secondary level qualifications to students in America, Australia and Europe. Most of the newly independent Commonwealth countries of Africa launched programmes for the same purpose in the 1960s and 1970s. It has been used at this level, too, to widen the curriculum of schools, bringing in subjects for which there is no teacher in remote schools in New Zealand, for example, and in urban schools in London. Over the last fifteen years, its use in higher education has attracted most attention as over twenty different countries have set up open universities. But university courses are not the only kind of education for which it has been used. Many third-world countries have used distance education for the inservice training of teachers, often on a large scale. It has been used to support technical and further education, sometimes backing up practical on-the-job training.

All these audiences share two common features. They have a high enough level of literacy for students to be able to work without difficulty from printed texts, and they have enough maturity to study without the support that comes from attending a school or college. In contrast, distance-teaching methods are of limited use for teaching literacy, or for teaching primary-level children. (School broadcasts, whether for direct teaching or for enrichment, can be useful and effective and may be regarded as a form of distance education. But they raise quite different organisational questions and are not considered further here.)

Distance education has also been used to provide nonformal education to adults in agriculture, health and politics. Botswana, Tanzania and Zambia have all used group discussion meetings, planned around printed texts and a radio programme, for large-scale educational campaigns. Development support communication, or distance education to support rural development, forms part of the regular work of many ministries of health and agriculture. Again, these nonformal uses are not discussed at length here, except insofar as they have a bearing on the organisation of distance education more generally.

1.2 Why is it used?

Distance education has most often been used for one or more of four educational purposes, although any one programme may have several ends.

1.2.1 Is it to widen educational opportunity and reduce inequality?

As distance education does not require attendance at a campus, it may give opportunities to students who would not otherwise have access to education. Some may have missed earlier opportunities for education; for some there may have been no such opportunities while for others the shortage of school or college places today means that distance education provides the only available route to education. Thus distance education has the potential to reduce some of the differences between the educationally advantaged and deprived, overcoming the handicap of distance by reaching those who live far away from school or college, or the handicap of time for those who cannot attend full-time.

1.2.2 Is it to meet manpower needs?

Distance education has been widely used to meet specific demands for manpower training. The Soviet Union, in the 1920s and 1930s, used correspondence teaching on a large scale to train engineers for its programme of industrialisation. Many countries in Africa and Asia have used distance education to provide part-time in-service training in order to overcome a shortage of teachers. Pakistan, for example, has reached 80 000 primary-school teachers in this way. Programmes of continuing education, which may also widen educational opportunity, can help update and improve the skills of a work force, and can do so without taking members of the work force off the job.

1.2.3 Is it to stimulate curriculum change?

Distance education has sometimes been used as a stimulus to curriculum change and to bring new ideas, methods and even subjects into schools. The combination of broadcasts with print and occasional seminars makes it possible to reach large numbers of teachers in a short time. The Mauritius College of the Air, for example, was able to introduce technical and practical subjects to the school curriculum by developing course materials for use by teachers and their students.

1.2.4 Is it to reduce costs?

As we shall see in chapter 5 distance education can, in some circumstances, offer educational opportunities at a lower cost per student, and produce graduates at a lower cost per graduate, than is achieved in conventional education. At secondary level, distance education's ability to offer a cheaper route to formal qualifications led the governments of Malawi and Zambia, for example, to set up government correspondence colleges.

In various ways, then, distance education may be relevant to some of today's educational problems of quality and quantity.

> For its main advantages relate directly to the source of the problems. First is its economy: school buildings are not required and teachers and administrators can be responsible for many times more students than they can accommodate in a school. Its second main advantage is its flexibility: people who have got jobs can study in their own time, in their own homes, without being removed from their work for long periods. Its third advantage is its seven-league boots: it can operate over long distances and cater for widely scattered student bodies.
>
> *Dodds et al. 1972, p.10*

1.3 How well does it work?

There is no single measure of educational quality or efficiency. Three measures have been used to compare distance education and more conventional forms of education: examination pass rates, completion or dropout rates, and costs per student or per graduate.

Where students working at a distance complete their courses, a number of distance-teaching institutions or programmes have found that their examination pass rates are similar to those for full-time students. Motivation is often all-important here: teacher-training programmes that use distance education have had very high pass rates where students were guaranteed promotion or qualified teacher status on graduation.

Pass rates may, however, conceal a high drop-out rate. Part-time study of any kind often presents difficulties to the student; the British Open University, for example, has found that between 50 per cent and 60 per cent of those who finally register on degree courses eventually graduate. This is much lower than the 80-90 per cent achieved by full-time students but is probably comparable to that of other part-time students. Australian universities, which offer part-time courses both on and off the campus have found that the graduation rate for students studying at a distance is very similar to that of part-time students studying on the campus. These programmes have in common that they provide well-developed tutorial support for students. In contrast, some studies of programmes at secondary level, using correspondence courses with little other support for their students, have found that drop-out rates rose as high as 80 per cent.

The cost of distance education is examined in more detail in chapter 5 where it is argued that under appropriate conditions students learning at a distance can succeed in passing their examinations and in doing so at a competitive cost. Reasonable success rates, and with them reasonable costs per graduate, depend on an effective distance-teaching system; much of the discussion in chapters 3 and 4 is designed to help design such a system.

There remain, however, more difficult questions about the quality of distance education as compared

with the quality of conventional education. Students, educators and citizens alike can, and do, ask whether the process of distance education can be as valuable as the process of more conventional education. There is no simple answer. It is possible to argue, on the one hand, that well-written distance-teaching materials are often of a higher quality than the run-of-the mill university lecture. (They should be: their preparation demands more resources.) A distance-education course should encourage independence and autonomy in the learner: students who have learned to work by themselves and at a distance may be at an advantage in pursuing learning independently after they have graduated. Against these advantages we need to balance the reduced opportunities for dialogue in much distance education and the danger that students will develop an exaggerated respect for and undue dependence on printed authorities because they have been forced to rely heavily on their texts.

Once a distance-teaching institution becomes established its reputation begins to rest on the quality of its graduates and the extent to which their degrees are respected and recognised by employers and by other universities or colleges. But at the outset this is impossible and the only advice for the planner is to suggest that the monitoring of quality should be part of the information system of the new institution from the very beginning.

Summary

Distance education can be defined as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from the learner.

It is likely to be most effective where it uses a combination of media including print, some arrangements for face-to-face support, and where possible broadcasting.

It has proved useful for a variety of educational purposes but requires a reasonable standard of literacy and sufficient maturity on the part of learners for them to study by themselves. It has been used to widen educational opportunity, to meet manpower training needs, to support curriculum change, and in the interests of holding down educational costs.

Students studying at a distance can satisfactorily work through their courses and pass their examinations.

2: What resources does it need?

All educational innovations make similar demands: a commitment to risk, the investment of credibility and capital ahead of any likely return, the diversion of staff from the well-tried to the experimental, and political faith in an idea. Within this context a new distance-education programme makes particular demands for resources and support, requiring finance, staff, educational support, and political backing.

Resources of these kinds are necessary no matter what institutional structure is proposed for a programme of distance education, although the way resources are deployed turns on questions of organisation and structure which are considered in chapters 3 and 4. Thus we need to ask much the same questions about resources no matter what institutional structure is being considered. In this discussion, therefore, the term 'distance-teaching institution' is used quite broadly to include, among others, open universities, small specialist units or departments and distance-teaching departments within conventional colleges or universities: its use does not imply that the decision to launch a programme of distance education means that you have to set up a new and quite separate institution.

2.1 What financial support is available?

Distance education has been acclaimed as a way of expanding education without the capital investment needed for new school or college buildings. Such economies exist and, over a period of years, we can expect that distance education may succeed in teaching students at a lower unit cost than is possible through conventional methods. But a new distance-education programme will require some capital investment as well as recurrent funding.

Capital expenditure, or the allocation of capital resources, will be needed in order to provide office buildings and specialist equipment such as printing machinery, broadcasting studios and computer hardware and software, and in due course to provide for their replacement and updating. In some cases it will be possible to use existing facilities at least for some of the functions of a distance-teaching institution, but in others the institution will require its own. Capital will be needed, too, for the writing, editing and physical production of teaching material as it is necessary to invest in course development well in advance of the enrolment of students. Thus certain capital costs have to be incurred well before any students are enrolled.

Effective distance education also requires adequate recurrent expenditure. Once courses have been written and printed it is possible to run a distance-teaching institution at a modest level of activity, using the same courses year in and year out. But courses get out of date: good distance education demands continuing finance so that both materials and methods can be kept up to date and continually developed and improved. Some government colleges have suffered, and their students have suffered more, because an initial willingness to fund distance education has not been followed by the continuing financial commitment needed to sustain work at the same quality. Equipment has become out of date and neither adequately serviced nor replaced. At least as important, courses have become tired and outdated, less effective and less interesting.

2.2 Can the staff be found?

Distance education needs academic and administrative staff in the same way as conventional education. But the jobs of staff members are different. Academics are called upon to write materials rather than to lecture and to tutor groups of students who are learning from printed materials rather than to teach them in the conventional way. Despite these differences, most distance-teaching institutions have been staffed by people who have come from conventional posts and learned on the job and there are benefits in having a flow of people in both directions between distance and conventional education. Increasingly there are opportunities for professional distance-education staff to follow in-service courses in order to develop their skills and expertise. If, therefore, a new distance-teaching institution can recruit able people with a general background in education and administration, and where necessary persuade its government to release them, it should be possible to staff a programme of distance education.

As the full-time staff of a distance-teaching institution develop so they become specialists of a new kind. Many of them need to be a hybrid between an educator and administrator, combining a variety of expertise in a way for which there is no direct analogue in conventional education. This has implications for the staff and promotion structure of a distance-teaching institution which will differ from that of a conventional university or government department. An open university may be able to work out its own staff structure without too much concern for parallels with conventional universities, although, if it is seeking parity of esteem, it will need to provide parity in terms of service. A distance-teaching department in a bimodal university – one which teaches both conventionally and at a distance – will in contrast need to seek a closer match between conditions for distance-education and conventional teaching or administrative staff.

Many distance-teaching institutions make extensive use of part-time staff as course writers, script-writers and broadcasters, tutors and counsellors for face-to-face sessions, and correspondence course tutors. A distance-teaching institution therefore needs to develop a structure for recruiting and rewarding part-time staff and particularly for training them. As they are unlikely to be familiar with the methods of distance education, training programmes on writing or tutoring, for example, will be necessary. The administration will also need to take

account of the particular interests of part-time staff; as their work is different from that prevailing in conventional education there may be no adequate precedents for the administrative structures needed.

2.3 What communication services are available?
Effective communications are essential for distance education. Students will benefit if we can use a variety of different media to teach and to communicate with them. We need to ask about the best way of distributing teaching materials in the various available media.

Perhaps the first question is about the quality of the post; rapid, two-way, communication between learner and tutor helps and encourages learning. At the Lesotho Distance Teaching Centre, in order to investigate the quality of the postal service,

> before committing ourselves to offering correspondence courses we carried out a small test ... We sent letters to the headmasters of several schools around the country enclosing a stamped addressed postcard. We asked them simply to post the cards straight back to us. We discovered the postal system worked very well; most letters were delivered in two or three days, although letters to the mountain districts could take up to two weeks.
>
> *Mitton 1982, p.8*

If the postal system is too slow, there may be alternative ways of distributing teaching materials. The Venezuelan open university (*Universidad Nacional Abierta*) distributes lessons to centres throughout the country for collection by students. In a programme for the upgrading of teachers it may be possible to deliver materials to students and collect work from them using the same machinery as is used to distribute salaries.

In industrialised countries it may be possible to use telephones and computer links to communicate with students. Telephone tutoring has proved useful for students in remote parts of industrialised countries. Increasingly students in these countries have access to microcomputers; distance-teaching institutions have begun to experiment with the use of computer links to support and teach their students. As these methods are not readily available outside the major cities of many developing countries they are not considered further here.

While distance education does not demand broadcasts, they have vital strengths. Broadcasting communicates immediately with none of the delays inseparable from the post and can make a subject come alive for the distant student. It puts distance education into the public eye and makes teaching openly available to all who have ears to hear. While it would be presumptuous to claim broadcasting time for every subject, no matter how specialised, its benefits are so great that it makes sense at least to ask how far it can be available. Where broadcasting is not available, it may instead be possible to make and distribute audiocassettes to students. These can usefully complement printed texts and, like radio, may have a different psychological effect on students from print. But cassettes have to be distributed physically and so are not, for all purposes, a suitable alternative to broadcasts.

More detailed questions will follow: about radio versus television, about signal strengths and coverage, about available broadcasting hours, about the roles of educators and broadcasters in making programmes, about the teaching role of particular media, and about the relationship between a distance-teaching institution and a broadcasting authority. For the moment it is enough to identify the question, 'Can broadcasts be available?', and to suggest that the answer yes will bring rewards for students while the answer no need not rule out a viable and effective programme.

2.4 How can face-to-face support be provided?
Rare individuals can learn quite alone and enjoy the process. Most of us require some sort of human contact to make our learning come alive, to resolve difficulties with a text, to get encouragement. If learning is to be more than the acquisition of predetermined information, then two-way discussion is of its essence. While there are ways of organising this at a distance, for most practical purposes face-to-face learning is a necessity in many countries. In some cases students may be able to attend a regular evening or weekend session near their home although there are often difficulties here: students may be widely scattered and social constraints may limit their ability to attend. In other cases it may be more convenient for students to attend a short residential session, although this, too, may cost dear in time and money. Students may be able to support each other in self-help study groups.

Whatever the arrangements, they will impose administrative burdens on the distance educator who will often need to borrow staff and premises from another institution in order to make face-to-face study possible. Tutors or group leaders will also need to be briefed and trained, as the skills of supporting students who are receiving most of their teaching at a distance are subtly different from those required in regular classroom teaching.

2.5 What support will a distance-teaching institution have from other schools and colleges and other parts of government?
A new distance-teaching institution is likely to seek help with face-to-face learning from other institutions in the educational system. It is likely to make other requests to them as well: it may need to borrow the skills of specialist teachers while its students may want arrangements for transfer, or accreditation or advanced standing at conventional institutions. At the planning stage, therefore, it will be necessary to ask questions about the relationships between a distance-teaching institution and other educational bodies. This has bearings on its constitutional structure (see 4.2-4.4 below).

A distance-teaching institution may also need help from other branches of government. It may want to

use a central transport organisation to distribute teaching materials and is likely to want access to broadcasting facilities. If it is teaching subjects like agriculture or health it may need professional advice from those ministries in developing its own materials. Two consequences follow: it will need political backing, discussed in the next section, and a constitutional structure which gives the necessary framework for consultation with other agencies.

2.6 What political support will it have?

Behind the last five questions lies a more general one about political support. A distance-teaching institution makes different demands from those of an ordinary school or college on the education service, on its host university or on government. Its establishment may be controversial or suspect. Harold Wilson, the Prime Minister under whom the British Open University was established, had this to say in his introduction to the memoirs of its first Vice-Chancellor Walter Perry:

> The original proposals met an almost unanimously hostile press – Sir Walter quotes the judgments of *The Times* and others, words which read strangely today. I seem to remember one warm welcome in *The Economist*. Opposition in the education world, from the established universities to adult education and local authorities, was hardly less robust. . . . Government departments, notably those of Education and Science and the Treasury, were uniformly critical, with a marked lack of enthusiasm on the part of certain senior ministers.
>
> *quoted in Perry 1976, p. xi*

The opposition was overcome, in that case, by political backing at the highest level which will not always be available or necessary. Distance education has a legitimacy today which it lacked in the mid-1960s, which can be symbolised by the unanimous parliamentary support in India for the Bill establishing the Indira Gandhi National Open University in 1985. But, within the context of each institution, whether that context is an individual university, or a ministry of education, or a national political system, political backing remains necessary both because distance education is often still an innovation and because of the demand for resources that it is bound to make and that is different from the demands of most schools or colleges.

Summary

While a programme of distance education can be launched without the buildings or capital investment needed for residential education, it does need capital investment for its specialist facilities and adequate funding for the acquisition or development of teaching materials.

Most distance-teaching institutions have been staffed by people with a background of conventional education. Both full- and part-time staff are, however, likely to have different roles in distance education from those in conventional education.

Planning for distance education requires a review of the communication infrastructure and of the arrangements that can be made for face-to-face study. A distance-teaching institution may need to work closely with other parts of government as well as with other educational bodies.

Appropriate political support is necessary in launching a new distance-teaching institution.

3: How does a distance-teaching institution work?

If students are to learn at a distance, they need effective educational and administrative support. This support differs from that needed by full-time students in an ordinary school or college. The planner therefore needs to identify the services to be provided to students and to have some understanding of the nature of these services before taking a decision about organisational structure. The key questions are about the necessary functions of a distance-teaching institution, teaching methods, the production of materials, the work of writers, students and tutors, and the award of credit.

3.1 What services need to be provided by a distance-teaching institution?

In eight areas these functions impose particular demands. In order to meet these demands, a distance-teaching institution needs a well-staffed and well-run central administration which can undertake the planning and scheduling of its programmes in such a way as to ensure that teaching and support services are available to students when they want them. While there is no separate heading below for the central administration, its smooth running is a prerequisite for all that follows.

The way the demands are met will vary from place to place and from time to time. Functions may be shared between institutions or concentrated in one. But, in planning for distance education, it is useful to distinguish between them and to ask where responsibility for them will lie.

The first three functions are broadly educational and the last five broadly administrative.

3.1.1 The design of educational programmes including acquiring and developing teaching material

Any distance-teaching institution needs to decide how it will teach its students and go on to ask how its teaching materials are to be developed. Distance education depends on teaching materials which are produced centrally, whether these are printed or broadcast. As the materials take the place of conventional face-to-face teaching, their quality is central to the quality of the education offered. Arrangements for the development of materials, which have a bearing on the administrative structure chosen, are considered further below (paras. 3.2-3.4).

3.1.2 Tutoring and counselling

Tutoring and counselling students at a distance are rather different jobs from teaching students face to face. A distance-teaching institution will need either to undertake this function or, if it is working in cooperation with partner departments or institutions, ensure that one of its partners is doing it effectively. In doing so it will need to take account of decisions about the way its students should work. Tutors, many of them working part-time, will need to be recruited and trained (see para. 3.5-6).

3.1.3 Award of credit

Some distance-teaching institutions, most notably the open universities, themselves have a status which makes it possible for them to award credit to their successful students while others prepare students for qualifications awarded by other bodies (see para. 3.7).

3.1.4 Production, storage and distribution

Once teaching materials have been designed and developed, they have to be reproduced and distributed. Printed materials or cassettes require physical distribution; broadcast materials require access to air time. Institutions will vary in the way they distribute materials but all will have a responsibility for ensuring that materials reach students when they need them.

3.1.5 Record system

A distance-teaching institution will need to keep records that are probably more systematised than those in a conventional college. Records are needed on students and their progress, on the production, storage and distribution of materials, and on finance. Detailed student records are needed both to control the despatch of teaching materials and for monitoring student progress, while records on materials need to include information both about their educational strengths and weaknesses and about their production and storage.

3.1.6 Financial system

While any organisation needs to keep control of its finances, the finance and costing of distance education is different from that of conventional education. (The implications of this are discussed in chapter 5.) Administrative systems for costing and for allocating resources need to be adapted to distance education as measures like 'contact-hour' do not translate easily into distance education.

3.1.7 Arrangements for recruitment

Many distance-teaching institutions will need to make arrangements for recruiting students, and informing potential students about what they can offer them. In some cases staff responsible for counselling students are also responsible for advising prospective students about courses that may be of interest to them. In others, a separate information service undertakes this work.

3.1.8 Evaluation

The word is used in more than one sense by educators and often refers to the testing of

individual students. Here, however, it refers to the evaluation of distance-education programmes and institutions. All educational processes are likely to benefit from formative evaluation; less familiar or innovatory ones can be expected to benefit all the more.

These functions need not all be undertaken by the same body. An institution might, for example, confine itself to the production of material for teaching at a distance and leave the job of distributing it or tutoring students to other agencies. Or a distance-teaching department within a bimodal university may itself have quite limited functions and leave other functions to other parts of the university. Tutoring and counselling may be controlled from the centre or may be decentralised or subcontracted to other agencies.

Decisions about teaching methods and about the award of credit will affect the choice of administrative structure, and vice-versa.

3.2 What teaching methods will it use?

Evidence from research and practice suggests that there are no intrinsic differences in effectiveness between educational media although there are major differences in their convenience for students or for tutors, their costs, and their attractiveness for any one purpose or to any one learner. Distance education is likely to be more effective if it can combine print, broadcasting or video material, and face-to-face study rather than relying on a single medium. The precise choice of media is likely to be determined by the infrastructure of communications (see para. 2.3 above) and by the comparative costs of different media (para. 5.3 below). Print is indispensable: students need a permanent record of their work and most of their learning will be done from a printed text.

The two qualities that distinguish broadcasting from print – that it conveys speech rather than its symbols and that it is instantaneous – are both important in determining its role. If broadcasting is available it can convey enthusiasm and stimulation, and overcome a student's sense of isolation, in a way which is given only to the rarest writers of prose. The immediacy of broadcasts also make it possible to communicate with students without the danger of postal delays. Audiocassettes, or videocassettes where students have access to videocassette players; can in many cases replace broadcasting but will not, of course, provide this immediacy, or keep the institution in the public eye or ear. They will, on the other hand, allow students to use recordings when they wish without being locked into a broadcasting timetable. (This may be double-edged: there is some evidence that a fixed timetable encourages students to watch or listen rather than to postpone doing so.) Broadcasting and cassettes can, of course, be used together. Universiti Sains Malaysia, for example, uses broadcasts for counselling and for teaching courses with large enrolments and audiocassettes for more specialised courses.

Face-to-face teaching allows both immediate and two-way communication. It can help learners relate their mass-produced learning materials to their own environment and their own interests. Perhaps most important of all, face-to-face dialogue allows the learning to move in directions that were not foreseen at the time the lesson was planned or written. Beyond its general value it has a particular strength for teaching practical subjects or languages where effective learning requires an immediate response from learners.

The varied strengths of different media reinforce the claim that students will benefit where it is possible to combine them. The choice of media for any one course, and the balance between them where several are used together, will be determined by the nature of the subject, the educational background of the learners, and practical issues of cost and convenience. In turn, the extent to which a distance-teaching institution plans to use any particular medium will affect its organisational structure and its relationship with other bodies. If, for example, it is to make regular and heavy use of broadcasts then it may need to employ specialist staff and facilities that would not be justified for merely occasional use.

3.3 Who will prepare and produce materials?

There are four possibilities. First, an institution may appoint its own academic staff who themselves produce most of the teaching materials. This decision implies that the institution will establish academic faculties or departments comparable to those of a conventional university. This has become the most usual structure for open universities. Second, its own staff may commission materials from writers outside the institution; in this case its staff will need the expertise to identify writers, and to edit their work, but will probably not be organised on a faculty basis. The Open Learning Agency in British Columbia, for example, draws its writers from educational establishments throughout the Province and beyond and does not have an academic faculty. Third, where a university teaches both face to face and at a distance, it may expect its academic staff to teach both externally and on the campus. In bimodal institutions of this kind much course material may be written by full-time academic staff, but not by staff who devote most of their time to distance education. Fourth, some institutions acquire materials from others. The Open Learning Institute of Hong Kong, for example, works mainly by using course materials which were produced in open or bimodal universities and for which it provides tutorial support. By acquiring materials, or the rights to them, an institution may be able to start work more quickly than if it has to develop everything for itself although it may still be necessary to devote time and resources to adapting such materials.

In practice, any institution is likely to employ writers on several different bases. Even if the institution looks mainly to its own staff for writers it is likely to go outside for some purposes: there may be too little work to keep a particular specialist busy

or the specialism may be so rare that it is impossible to compete with an existing institution for the academic's services.

In all cases it will be necessary to make contractual arrangements with course writers. These arrangements need to ensure that the institution has the necessary assurance of the quality of the materials being written and that it has an adequate measure of control over materials produced in its name. At the same time, contractual arrangements will need to protect the academic reputation of any writer whose name is associated with them. Where a distance-teaching institution's own full-time academic staff are writing materials these matters are likely to be covered by their contract of employment. In bimodal universities, or where outside writers are used, a series of administrative issues arise. Will writers be paid, over and above their salary, when they write courses? Will they be relieved of regular teaching duties while they are writing? Can they be seconded to the staff of the distance-education department? Who will own copyright and what control will writers have over the long-term use of materials with which their names are associated? What choice will a distance-education department in a bimodal institution have in the selection of course writers and what sanctions will it be able to employ if their work arrives late or is unsatisfactory? While it is not, of course, necessary to answer all these questions at the planning stage, it makes sense to keep them in mind in considering alternative approaches to course development and their implications for the choice of administrative model.

3.4 How will the writers work?

While lectures are usually given by a single teacher, distance-teaching materials usually need the co-operation of a group of people. They are likely to need a specialist in instructional design. Where they use more than one medium, they may need specialists in broadcasting production, in editing for educational effectiveness, and in graphic design as well as in the subject being taught. A course stretching across conventional subject boundaries will demand writers from different academic specialisms.

The composition of any teams that produce materials will depend on the organisational structure of the institution. Some large institutions may, for example, have broadcasting producers on their own staff while a smaller or more narrowly based institution is less likely to do so.

In some cases the written element of a course is drafted by a single author, working in co-operation with an editor employed by the distance-teaching institution. More often, courses are developed by larger teams which bring together subject specialists, media producers, and editors or educational technologists with pedagogical skills. In open universities, which can rely on their own academic staff, such teams may work closely together, on a more or less full-time basis over a period of some months. Where writers are from outside the institution, and working part-time, such intensive interaction is seldom possible although some courses have been developed in short workshops of two to three weeks. This intensive process may save on writing time but increases the demand on the editor who works on the material after the workshop.

Major difficulties can arise in employing part-time course writers. Potential writers often underestimate the time it will take to produce a course and the demands of their regular job, if they have one, normally take precedence over their writing. In any small country the pressures on an academic specialist are likely to be so great, in terms of university work, consultancy, government committee work and the like, that part-time writing becomes a heavy burden. If a writer produces a single course, then there is a comparatively small return to the institution for the time and effort it puts into the training of a course writer. As a result, a number of institutions, and especially those working in the south, advise against employing part-time writers. There are, however, institutions which successfully use part-time writers for much of their work although the majority of these are in the industrialised countries of the north.

No matter how many or how few authors are working on a course, their material will need to be edited. The job of editing goes well beyond copy editing. There are specialist pedagogical skills in presenting teaching material, so that it is effective and useful to students. An editor (or educational technologist or transformer: titles for this person vary from one institution to another) who can bring these skills to bear on authors' texts thus has an indispensable role to play in the production of good teaching material.

3.5 How will the students work?

A distance-teaching institution will need to make decisions about the ways in which its students will work through their courses, and about the support they will receive: these decisions will, in turn, influence both the design of teaching materials and the choice of an administrative structure.

Students in many programmes are likely to work at home. But a distance-teaching institution may decide to make arrangements for them to come together for group study, either for short sessions in an evening or at a weekend, or for a longer period such as a one or two-week summer school. Sessions may be voluntary or compulsory; in subjects with a practical or laboratory component many distance-teaching institutions have made some face-to-face work compulsory in order to match their courses as closely as possible to those of conventional institutions and to ensure that students have adequate hands-on experience.

Decisions will also be needed about pacing. Correspondence colleges in the private sector, which teach for public examinations, have traditionally allowed students to enrol at any time of the year and left them to decide how to pace their work and ensure they are ready for their examinations at the appropriate time. In contrast, many open and bimodal universities require all students to enrol at a fixed time in the year and to work at a predetermined

pace, whether they are working full-time or part-time, on the campus or off it. This facilitates the arrangement of broadcasts and face-to-face courses but at the expense of flexibility for the student.

3.6 How will the students be tutored?

Decisions about the way students should work have a bearing on the employment of tutors and counsellors. Students are likely to need both face-to-face tutors and tutors to mark their written work, most of whom will work part-time, and many of whom may be located away from the institution's headquarters. Tutors may be employed by a distance-teaching institution or the institution may co-operate with other colleges or universities so that the latter take responsibility for providing tutorial support of one kind or another.

In some cases a tutor will also provide general counselling and advice to students. In others the job of counselling is separated from that of tutoring. Many distance-teaching institutions in Australia and Canada, for example, appoint counsellors as well as tutors, encouraging students to take all their general study problems to their counsellor, and to have more frequent contact with their counsellor than their tutor if they feel the need to do so.

The work of tutors and counsellors is likely to be crucial to the success of the programme; good tutoring results in a higher completion and success rate for students. A distance-teaching institution therefore will need to establish a system for the recruitment, selection, briefing, and training of tutors and for overseeing their work. The training will need to take account of the fact that the roles of tutor and counsellor in distance education, where the content of teaching is carried by print or audiovisual materials, are different from those of teachers in conventional education.

3.7 Who will award credit?

This issue turns on the choice of constitutional structure: a fully independent institution may award its own degrees, while other types of institution are likely to prepare students for the examinations of a different body. But there are supplementary questions about the form of awards to be made and the form of examination.

If an institution is to teach for a qualification which it does not itself award, it is necessary to ask whether it can have any influence on the style of examination for its students; an examination designed for internal, full-time students may be less suitable for those working part-time externally. Some universities have taken the view that, to maintain parity of esteem between internal and external degrees, all students must take identical examinations. Other universities, and examining boards, have set examinations specifically for external or part-time students that are equivalent but not identical to those taken by full-time students.

Where a distance-teaching institution has some influence or control over qualifications it will need to make decisions about methods of assessment and, in particular, about the relative roles of continuous assessment and of formal, end-of-course, examinations. Students' views here are likely to be mixed: some will welcome the opportunity to build up marks through continuous assessment while others will see the link between their tutors' assessment of their work and their final credit award as a threat and as something that čan jeopardise good relations with their tutor.

Decisions about the award of credit are likely to be linked with decisions about entry standards where some distance-teaching institutions have allowed open entry in the sense of requiring no prior qualification for entrants while others have matched their entry requirements to those of comparable full-time institutions. In either case there will be pressure to ensure that exit standards match those of comparable institutions; the concern to do this is likely to be particularly strong where an institution allows open entry.

Summary

A distance-teaching institution needs to address both administrative and educational functions differently from a conventional school or college. In doing so decisions about its teaching methods will be of prime importance in shaping its administrative structure.

The choice of teaching methods will be conditioned by the nature of the subject, the educational background of the students, the comparative cost of different media, and their convenience for learners and tutors.

Materials may be produced by the regular staff of an institution, by outside writers working on contract, or by staff members of the parent body in a bimodal institution, or they may be acquired from a different institution. They may be written either by teams of authors or by a single author. In all cases they will need editorial work with inputs from an editor who brings pedagogical skills to the job.

Decisions about how students should work will affect the design of teaching materials as well as the organisational structure of the institution. Tutoring and counselling are a key to success; much of this work is likely to fall on part-time tutors and counsellors who will need training and support from the central organisation.

A distance-education programme will be shaped by decisions about who is to award academic credit for it.

4: What sort of organisation should it have?

The choice of an organisational and administrative structure for a distance-teaching institution will be determined within a web of economic, social and political circumstances; these in turn will affect the way in which the institution addresses its various functions. There are, however, likely to be opportunities to choose between alternative ways of setting up a distance-teaching institution. At the risk of over-simplification these alternatives are reduced to six organisational models.

4.1 Which administrative structure will best meet your needs?

The starting point for these models is the need to choose between three types of structure: a free-standing distance-teaching institution, a distance-teaching department within a university or college, or a co-operative arrangement between several institutions. The choice of a free-standing model determines that the institution will itself undertake most of the functions identified in chapter 3; either of the other choices leads to a new set of decisions. If we are interested in a distance-teaching department then we need to ask whether it is concerned with a single academic discipline or with several and then go on to ask more detailed questions about the internal and external working of the proposed department. If we are interested in a co-operative structure, we need to work out the distribution of functions between the various partners. The models are set out in figure 1.

The first two models are of free-standing, usually autonomous, distance-teaching institutions whose dominant or sole function is distance teaching. Institutions of this kind are responsible for producing teaching materials, for teaching students and in some cases for examining them and awarding degrees or diplomas. The first model is of a **multi-purpose free-standing institution:** it includes open universities, such as the Open University in Britain and the Indira Gandhi National Open University in India, but also includes colleges such as the Tanzanian National Correspondence Institute working under the auspices of a ministry of education and offering courses of various kinds at various levels. Box 1 sets out the case for an open university on model 1.

The second model is of a **single-purpose free-standing institution;** in contrast with the previous model, some distance-teaching colleges have been set up to teach a single subject, especially for teacher training. William Pitcher College in Swaziland, for example, was established to provide distance-teaching courses for the inservice training of teachers.

In contrast, many universities or colleges decide to set up a distance-teaching department which works alongside other departments, specialising in distance education, but within an otherwise conventional institution. The general case for a bimodal institution, which works in these two ways, is set out in box 2.

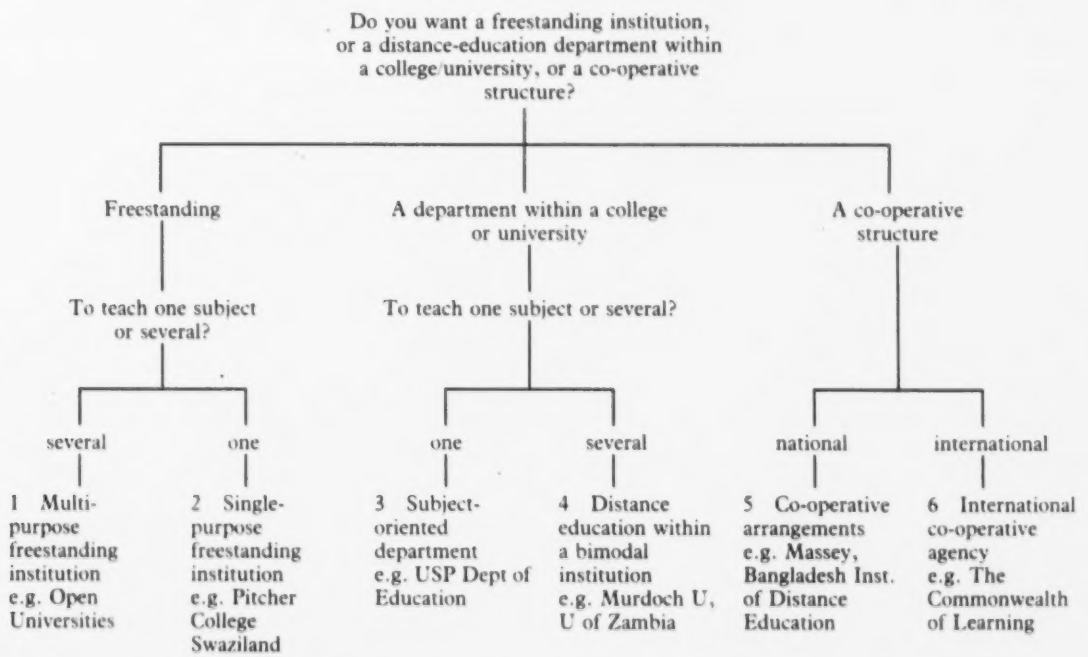
Do you want a freestanding institution, or a distance-education department within a college/university, or a co-operative structure?
Freestanding
A department within a college or university
A co-operative structure
To teach one subject or several?
To teach one subject or several?
several
one
one
several
national
international
1 Multi-purpose freestanding institution e.g. Open Universities
2 Single-purpose freestanding institution e.g. Pitcher College Swaziland
3 Subject-oriented department e.g. USP Dept of Education
4 Distance education within a bimodal institution e.g. Murdoch U, U of Zambia
5 Co-operative arrangements e.g. Massey, Bangladesh Inst. of Distance Education
6 International co-operative agency e.g. The Commonwealth of Learning

Figure 1: Models of distance-teaching institutions

Model 3 is of a **subject-oriented department** within a larger institution, which teaches externally in its own discipline. At the University of the South Pacific, for example, the Department of Education launched the first distance-education programmes for teacher education before the university began to teach at a distance in other subjects.

Where a college or university decides to teach at a distance in a number of different subjects it usually establishes a **distance-education department** (model 4) to take the main responsibility for planning and running distance education within a bimodal institution. Questions then follow about the organisational structure and working of the department. Some universities have adopted a variant of this model in which the distance-education department is purely administrative, with no pedagogical functions. At both the University of New England in Australia and the University of Zambia, for example, staff can be required under their terms of employment to teach both face to face and at a distance but the role of the specialist department is essentially one of co-ordination and distribution. Other institutions, such as Murdoch University in Australia, have set up a specialist distance-teaching department which has a pedagogical function. While it does not employ its own subject specialists it does have staff with educational skills in distance education who play a role in the development and use of materials which goes beyond the purely administrative one. Similarly Deakin University in Australia has a specialist institute of distance education although responsibility for teaching and advising students rests with the faculties and administrative departments which also look after full-time students. Some institutions have gone further in separating off distance-education activities and adopted a model with an external teaching department with its own subject-specialist staff concerned solely with external students. There are important examples of this variant in the United States. The University of Wisconsin Extension, for example, has the responsibility for teaching off-campus students in various ways which include distance education; with a staff of well over 1000 and a full range of academic departments it is as large as some free-standing universities but exists in parallel with the University of Wisconsin.

There are several different versions of the final two models of co-operative arrangements in which institutions work together to teach students and in which the various functions are distributed between the parties instead of being concentrated in one institution. Some of these provide for national and some for international co-operation. Under model 5 of **national co-operative structures** the functions of preparing materials, of giving tutorial support to

Box 1: The case for an open university

The 'classic' structural model for a distance education system is undoubtedly the purpose-built system which teaches only at a distance. . . . The arguments in favour of purpose-built distance education institutions stem from the conviction that the administrative structures of conventional educational systems are not the most suitable ones for developing and managing distance systems. Distance systems engage in a number of quasi-industrial processes. Their academic staff are a part of the production process, required to work in a disciplined manner and deliver the products of their labour to the production departments on time. The 'best' results are likely to be obtained where the 'corporate culture' encourages disciplined adherence to production schedules, with academics subjected to managerial controls and accountable for their work in ways that are at variance with the almost complete autonomy they enjoy in conventional universities.

It is also said that the requirements of distance students are likely to be better served if the institution is wholly dedicated to their needs. It is easier for purpose-built distance education institutions, or at the very least a self-contained and relatively autonomous distance unit operating within a mixed-mode institution, to develop new courses to meet the needs of distance students – particularly where they are adults studying part-time. Autonomous purpose-built distance education institutions or units are also thought to be more appropriate where the characteristics of the target audience are significantly different from those of the campus-based students, as is the case where the latter are largely young adults at the tertiary stage of their initial education while the former are adults with distinctive – adult – approaches towards learning. Otto Peters, former head of the German Fernuniversitaet, believes that the pedagogy of distance teaching is different from that of conventional systems and for that reason too it is better to have separate systems.

Finally, it has been suggested that significant innovation is more likely to occur outside the framework of traditional educational institutions. In both the United Kingdom and the Netherlands the traditional universities showed little interest in distance education at the time when consideration was being given to the foundation of the British and Dutch distance teaching universities.

adapted from Rumble 1986, pp 104-5

students, and of awarding credit may be carried out by different partners. In New Zealand students can enrol for distance-teaching courses with Massey University but receive credit for the work they do from their local university. The Bangladesh Institute of Distance Education trains teachers at a distance, working with the University of Rajshahi which provides academic supervision and awards degrees, and with teacher-training colleges which provide face-to-face support for students. The Chinese Television University produces materials which are used by a federation of universities who provide tutorial support to back the centrally produced courses.

Co-operative arrangements need not be permanent, or all-purpose. In Australia, for example, three universities co-operated on the development and running of a degree-level course in women's studies, where it would have been difficult for any one of them to offer the course on its own, and where the universities were not working together on their whole range of programmes.

All these examples are of co-operation within national frontiers. Co-operation is, however, also possible internationally so that we have a sixth model of **international co-operative structures.** Commonwealth Heads of Government agreed in 1987 to set up The Commonwealth of Learning in order to promote co-operation in distance education within the Commonwealth and to facilitate the sharing of resources among Commonwealth colleges and universities. The Commonwealth of Learning is launching and running programmes in which institutions share existing teaching materials and work together to develop new materials. It is also promoting co-operation in training, information and research. The functions of The Commonwealth of Learning are set out in box 3.

Several other institutions have recently been established to promote international co-operation in distance education. With support from Canada and France the *Consortium international francophone de formation à distance* (CIFFAD) has been set up with broadly comparable objectives to those of The Commonwealth of Learning. The European Association of Distance Teaching Universities is beginning to work on the sharing and joint development of teaching material. There are proposals for similar work in Latin America.

Box 2: A bimodal university

The fear is sometimes expressed that if on-campus and off-campus education are combined in a single institution the on-campus component will take precedence and off-campus students will be second-class citizens. At Deakin University we have shown that the combination with on-campus students need not preclude a high standard of provision for off-campus students. This has been done on a relatively small scale: Deakin had about 3000 off-campus and 2000 on-campus students in 1981, the fourth year of the off-campus operation. . . .

Deakin University policy is to minimise the differences between on-campus and off-campus students. However, we did not adapt on-campus courses for off-campus use. On the contrary, we proceeded the other way round. We prepared structured learning materials including plenty of student activities. The materials were prepared by course teams and were professionally edited, designed, and printed in an attractive format. We hoped that if we could solve the educational problems of the off-campus students, those of on-campus students would pose no great difficulties. Indeed we saw several advantages to this approach.

1. Self-instructional materials provide consistent quality of instruction. Unlike lecturers, learning materials do not have 'off' days.
2. The use of self-instructional materials is in theory good educational practice. Staff in the School of Education felt that at last they would be able to practise what they preached. Hitherto they had to spend much time standing in front of their classes telling students that they should not just stand in front of their classes telling them things. Now they could encourage learning through activities, just as they wanted their student teachers to do when they got out into schools.
3. Staff radicals saw the new mode as a liberation. Students would be liberated from the constraints of the traditional lecture and tutorial system and staff would be liberated from the lecturing grind and free to teach in more interactive ways. . . .

Delivery and support mechanisms are quite different for the two types of student. Off-campus students get study guides, readers, audio tapes, and informal supplementary material such as newsletters through the post. There is no compulsory attendance for any kind of teaching. Optional tutorial support is available at eleven locations. . . . On-campus students studying in the 'open' mode, that is, using self-instructional materials, do not get formal lectures. Typically they have two hours a week contact time used in various ways.

Jevons 1982, pp 126-7

Any distance-teaching institution may therefore wish to consider the potential for international co-operation as it gets under way. But, so far, such schemes are not a substitute for national developments but an addition to them. They are not enrolling students directly but are providing services to back up the work of national institutions.

The six models are, of course, somewhat arbitrary and there are both possible and actual hybrids between them. In several cases an institution has broader functions than this account might suggest. The Indira Gandhi National Open University, for example, serves both as an autonomous institution, teaching its own students, and as a co-operative body where it has co-ordinating and funding responsibilities for the other Indian open universities. Similarly the Lesotho Distance Teaching Centre and Tanzania National Correspondence Institute are multi-purpose institutions (model 1) but in their teacher education programmes work within a co-operative framework that might be classified as model 5. The models do, however, serve to compare the advantages and drawbacks of various approaches.

4.2 How do you choose between structures?

The choice of model is likely to be determined by the scale of the educational needs to be addressed, the educational purpose, and the available resources.

Scale comes first. The open universities set up in Britain in 1969 and Thailand in 1978, for example, planned from the outset to recruit students in tens of thousands and build up to a student body of 100 000 or more. At this scale it is worth considering the establishment of a free-standing institution such as an open university, with a full range of functions (model 1), and it may be unrealistic to consider any other option. In contrast it would not make sense to consider setting up such an institution if the intention was to recruit only a thousand students. In Malaysia, for example, doubts about the viability of degree-level distance education led to the choice of a bimodal approach with the off-campus programme of Universiti Sains Malaysia recruiting students in hundreds rather than thousands. Scale will be affected by the size of the institution's catchment area and by the existing opportunities available for part-time study.

Educational purpose is likely to be the next determinant of choice after scale. Where the purpose is narrowly defined, as for example in programmes for the upgrading of teachers, the choice is likely to be limited to a single-purpose distance-teaching institution (model 2), or a department within an existing institution (model 3) or a co-operative scheme (model 4). The level at which a new distance-teaching institution is to work will heavily influence the choice of model; it may be difficult to set up a unit within another institution (models 3 and 4) if the parent institution has no experience of teaching at the level concerned. Thus a distance-teaching institution working at secondary level may fit uneasily within a university although it will not necessarily do so: the University of Nairobi successfully housed such a unit for many years.

The level and nature of the human, physical and financial resources that are likely to be available in turn affect the choice of model. If resources are severely constrained some models may be unrealistic. Small countries with a limited educational

Box 3: The functions of the Commonwealth of Learning

I ESTABLISHMENT OF THE COMMONWEALTH OF LEARNING

1 There will be established an institution to be called 'The Commonwealth of Learning', an Agency which will be an international organisation with member countries of the Commonwealth, through their Governments, as participants.

II PURPOSE AND FUNCTIONS

2 The purpose of the Agency is to create and widen access to opportunities for learning, by promoting co-operation between universities, colleges and other educational institutions throughout the Commonwealth, making use of the potential offered by distance education and by the application of communication technologies to education. The Agency's activities will aim to strengthen member countries' capacities to develop the human resources required for their economic and social development, and will give priority to those developmental needs to which Commonwealth co-operation can be applied. The Agency will work in a flexible manner and be capable of responding effectively to changing needs. It will serve the interests of Commonwealth member countries and of the Commonwealth itself, working in cooperation with Governments and other Commonwealth agencies and educational institutions and doing so in a way that is consistent with the principles that have guided the Commonwealth. In performing its functions the Agency will seek to ensure the appropriateness of programmes and of distance-education techniques and technologies to the particular requirements of member countries.

Extracted from Commonwealth Secretariat 1988

infrastructure which already have difficulty in staffing a single conventional university are likely to have difficulty in finding the staff for a separate open university.

Small states are, in any case, likely to be constrained in the way they use distance education or establish distance-teaching institutions. Where populations are low, it is difficult to get the economies of scale which make distance education look economically attractive. But, at the same time, the isolation of small island countries suggests that distance education can have a role in bringing into the country educational resources that would not otherwise be available. Countries in the Caribbean and the South Pacific have been able to resolve that dilemma by calling on the resources of the two regional universities, both of which have launched programmes of distance education, and administering distance education through the existing structures for off-campus education. The price of this is that a unit teaching at a distance in one of these countries necessarily lacks the autonomy that may be enjoyed by institutions in larger countries.

4.3 How much autonomy are you seeking and how will this affect your activities?

In many cases an examination of scale, needs and resources will not be enough to determine the choice of model and the decision is likely to turn on the advantages and disadvantages of seeking a particular degree of autonomy. If we classify the models, according to the degree of autonomy they allow the individual distance-teaching institution, then the open universities lie at one end of the scale and some of the co-operative structures at the other. Autonomous institutions have the greater freedom to determine their own ways of working, and are more likely to undertake the full range of functions needed for a programme of distance education (see para. 3.1 above). At the same time, their autonomy means that they are constitutionally separate from partner institutions with whom they may need to co-operate. Decisions about autonomy may themselves depend on the ease with which a new institution can call on support from other government and nongovernment agencies.

In considering the desirable degree of autonomy it is necessary to start with political realities: there may, for example, be a political commitment to establishing a free-standing institution which could not be discharged by any alternative. The political realities may, however, work the other way: in some circumstances it would be politically unrealistic to propose the establishment of an autonomous institution in the face of opposition from powerful educational or political interests.

Autonomy is double-edged. It will give the freedom of action to determine curricula and develop courses and teaching methods tailored to the needs of external students, without needing to consider how these fit with arrangements for conventional, full-time, students. On the other hand a free-standing autonomous institution has to earn a status for its work; if it is to award degrees then these may not command the same respect as those of a well-established institution, even if the latter now allows students to work for them in unconventional ways. An autonomous institution, too, may need to devote more attention and resources to arrangements for co-operation with other bodies than is necessary for a unit which is part of a larger institution.

Within the political constraints, it is then necessary to ask questions about the various services which a distance-teaching institution will need in order to meet its functions. Ease of access to services from other institutions may determine how far it is desirable or realistic to seek a degree of autonomy or a particular form of co-operation. If, for example, a distance-teaching institution needs help from particular institutions in providing support services for students, or access to a given group of academic staff as potential course writers, then these requirements will shape its decisions about autonomy and dependence.

Where political realities and the availability of services leave the question open, you may be faced with the fairly luxurious question of what you would do best, and prefer to do, within the new institution and what you would prefer to leave to others.

Figure 2 summarises the functions undertaken by distance-teaching institutions following models 1 to 6.

4.4 How can we compare the models?

Following this general discussion we can compare the advantages and disadvantages of the six models set out in figure 1. The first comparison is between the free-standing institutions (models 1 and 2) and the bimodal ones (models 3 and 4) in which the same institution teaches both conventionally and at a distance.

Free-standing institutions see their concentration on distance education as a positive advantage which means that they can develop teaching methods and course materials with the sole interest of students learning at a distance. Conventional university structures may, in contrast, inhibit the development of the best practice for students learning at a distance. Conventional institutions, too, may regard distance education as a poor relation which lacks esteem and in consequence may be reluctant to allocate it adequate resources. Advocates of bimodal institutions argue, on the other hand, that, where the same courses are available in more than one mode at the same institution, the students benefit from the esteem that comes from a conventional university and the demonstrated parity of standards, and from the ability to move from one mode of study to another.

In practice, the choice between single-mode and bimodal institutions is likely to be strongly influenced by the political and educational context within which the institutions are working. In Australia, for example, where education is a provincial rather than a federal responsibility, and there was no obvious base from which an open university could be established, distance education has grown up in bimodal institutions. In Britain, it was possible for

there to be a national initiative; as the existing universities were generally opposed to the development of an open university the setting up of a fully autonomous and freestanding institution was probably the only way that would have worked. In India the establishment of the Indira Gandhi National Open University as an autonomous university with wide powers marked it off as something qualitatively different from the existing correspondence departments within bimodal universities.

If the decision is for establishing a bimodal institution, perhaps by introducing distance education to an existing college or university, or a co-operative structure then a further set of choices has to be made about the functions which the distance-teaching institution or department will undertake. These will determine the choice between variants of the bimodal model (3 and 4) and possible co-operative schemes (models 5 and 6). The choice will often turn on the control of teaching (see para. 4.2-3 above). If the same institution plans to develop teaching material and provide tutorial support for it, then it is likely to choose one of the bimodal models. If, in contrast, it plans to concentrate on the production of material and leave tutoring to another, perhaps more local, organisation, there will be advantages in seeking a co-operative structure. The Open Learning Institute in Hong Kong, for example, has developed co-operative arrangements with other institutions of tertiary education in Hong Kong to provide tutorial support for its students, and working with universities outside Hong Kong from which it is buying teaching materials. In developing this pattern of work it has built on the experience of the earlier Open College of Hong Kong whose methods of working are described in box 4.

FUNCTIONS	MODELS					
	1 Multi-purpose freestanding institution	2 Single purpose freestanding institution	3 Subject-oriented department	4 Distance education dept in bimodal institution	5 Co-operative arrangements	6 International co-operative agency
Design of educational programmes and materials	Undertakes with own or outside staff	Undertakes with own or outside staff	Undertakes usually with own staff	Undertakes mainly with staff of parent institution	Likely to be shared between partners	May undertake or share with partners
Tutoring and counselling	Undertakes	Undertakes	Undertakes	Undertakes but responsibility may rest in other part of parent instn	May be undertaken by different partner	Likely to be undertaken by national partners
Award of credit	OUs likely to award own	May award	Likely to be responsibility of parent institution	Likely to be responsibility of parent institution	May rest with one partner	Likely to rest with national partners
Production, storage, distribution	Undertakes	Undertakes	Undertakes	Responsibility may rest with other part of parent instn	May be shared between partners	Some may be done centrally but likely to be done by national partners
Record system	Essential	Essential	Essential but may be integrated with that of parent instn	Essential but may be integrated with that of parent instn	May be more limited if no students enrolled direct	May be more limited if no students enrolled direct
Financial system	Essential	Essential	Essential	Essential	Essential	Essential
Recruitment system	Necessary	Necessary	Necessary but may be integrated with that of parent instn	Necessary but may be integrated with that of parent instn	Likely to rest with one or more partners	Unnecessary if no students enrolled direct
Evaluation	Desirable	Desirable but may rest with another dept of parent institution	Desirable but may rest with another dept of parent institution	Desirable	Desirable	Desirable

Figure 2: Functions undertaken under various models of distance-teaching institutions

Similar questions about function and control arise in comparing the different variants of model 4 of a bimodal institution teaching at a distance in a variety of subjects. One possibility is to establish a distance-teaching unit with purely administrative functions on the argument that academic subject staff should have the sole responsibility for their teaching material so that distance education only needs administrators. It is more often argued that the production of good material, and the provision of tutorial services, demand specialist pedagogical skills which are somewhat different from those needed for conventional teaching. This argument drives us on to the variant in which a distance-teaching unit has educational staff with these skills to work with academics. It is probably more difficult to introduce distance education to an existing institution, where staff were appointed with the expectation that all their teaching would be face to face, than to build it into a bimodal institution from the start.

There are few examples of the remaining variant in which a parallel structure, solely devoted to external students and staffed by a separate group of academics is set up alongside a conventional university, although as noted above it exists among some of the large American land-grant universities.

There is no consensus on a best buy among the six models but four conclusions can be drawn. First, multi-purpose autonomous institutions, including open universities, have a record of success that compels attention. Second, bimodal institutions also have demonstrable advantages. They appear to be most successful where they have established a well-supported distance-teaching unit, with its own educational staff who can remain close to the conventional work of the university but can bring pedagogical expertise to the development of distance education. Third, single-purpose or single-subject departments and institutions appear either to have evolved into broader institutions or to have closed down, suggesting that models 2 or 3 are insufficiently robust, although they may be valuable for doing a specific job over a limited period of time. Fourth, while many educators have expressed scepticism about co-operative structures, their potential for harnessing resources makes them of long-term significance both nationally and internationally.

Summary

The constitution and structure of a distance-teaching institution will follow from its functions

Box 4: The Open College of Hong Kong

The Open College (OC) is organised and staffed in order to offer courses, designed elsewhere, without unacceptable changes in curriculum, pedagogy or examining. The aim is to reproduce each course in such a way as to gain agreement from its originators that exit performance standards are 'the same' as in the originating institution. . . .

This grade [awarded by the Open College] is guaranteed by the use of examiners or assessors from the originating university for each course. Ideally the assessment is identical. That is, continuous assessment questions, tutor notes on assignment grading, final examinations and marking protocols, are all identical across the two institutions.

Because the OC teaches and examines at the same level as the originating institutions it has credit-recognition agreements with them and other universities. . . .

In raising the students to the exit standards we must be ready to repeat the pedagogy which the originators designed into the course. Again the external examiner or assessor is the judge of this. Consequently we must be catholic in the kinds of support we are prepared to offer and not at all squeamish about allowing different pedagogy in different courses. With the examiner satisfied there is no objection to improving on that pedagogy in the interests of the students. . . .

The most obvious result of using this model is that ten ordinary degree programmes are on the ground and working, five of which will offer honours next year. . . . The chronology is, I think, a fair indication of what might be achieved elsewhere. The Planning Committee of the Open College began its work in mid-October 1981; the first students began courses in mid-September 1982; and the first graduates will appear in August of 1986. All but one of the graduates will have taken four years. This has been achieved by eight academic members of staff rising to thirteen in 1985-86.

The result of this parasitic strategy has been that a range of worthwhile degrees has been made almost instantly available to any adult in the region who wishes to try them at no cost to the authorities and bearable cost to the student. . . .

Most importantly, the degrees thus gained are of good Commonwealth standard. By this strategy they can be relied on to remain so. They can then act as a useful means to facilitate transfer of students to other universities.

Swift 1986, pp 1-3

and the activities which it chooses to undertake or to arrange for other bodies to undertake.

The first stage in choosing a structure is to compare the advantages of free-standing institutions such as open universities, bimodal institutions which teach both conventionally and at a distance, and co-operative arrangements between groups of institutions that collaborate either nationally or internationally.

The choice is then likely to be determined by questions of the scale at which an institution will work, of the nature of the educational needs to be met, of the available resources, and of the degree of autonomy sought.

5: What will it cost?

Questions of both practice and policy arise in considering the cost of establishing and running a distance-teaching institution. It is necessary to answer practical questions about the budget and about the resources needed to launch an institution or programme, and to establish, as a guide to policy, how the costs of distance education are likely to compare with those of conventional education. Similar methods can be used for both purposes.

The starting point is to consider the purpose of the institution, the anticipated numbers of students to be enrolled and courses to be developed, and the teaching methods to be used; together these will give some idea of the scale of resources needed. It is then helpful to distinguish between the fixed costs, including capital and administrative staff costs, and the variable costs which will vary, particularly with the number of students and the number of courses. Of course in the long run no costs are fixed: you need a larger building to administer 100 000 students than you do for 1000. But the distinction is a convenient and practical one in the short run which facilitates the estimation of start-up and running costs and the preparation of budgets. It also makes it possible to compare the cost of conventional and distance education.

Having distinguished between fixed and variable costs, it is useful to identify the factors which determine the level of variable costs. In some cases it is the number of students: the supply of a booklet on how to study will vary with this number. Other determinants are more complicated: both the number of courses to be offered and the life of a course before it is revised or rewritten, will affect the variable costs for course development and maintenance. The cost per student of any tutorial sessions will vary both with their frequency and with the staffing ratio.

5.1 What will the fixed costs be?

The main elements within a distance-teaching institution's fixed costs are likely to be for capital investment and for full-time staff.

Capital investment may be needed for:

- buildings;
- furniture, fittings, office equipment;
- computers and peripherals for both management and course production;
- printing facilities;
- broadcasting studio, equipment and transmitters;
- vehicles.

While a distance-teaching institution may need access to any of these it may be possible to launch a project with little or no expenditure on capital by making use of existing facilities. Before calculating actual costs, therefore, it is necessary to investigate what buildings and services have spare capacity and may be available. It remains necessary, of course, to make a judgment about the balance of advantage between sharing and controlling facilities. If, for example, a distance-teaching institution has access to a university or government printer, but cannot get the priority it needs, it may wish to invest in its own equipment for at least some stages of the printing process.

The main recurrent elements within the fixed costs will be for salaries. The nature of these salary costs will be determined by the choice of model which will establish, for example, how far the institution will need its own academic staff or full-time field workers, or broadcasting producers. The size of the staff will, of course, also be affected by the scale of the proposed institution and the work it is to do. It is convenient to regard many of the overhead costs of running the office as being fixed although some of these costs will in practice vary with the number of students.

In determining both capital and staff costs the best guide will be the equivalent figures for any enterprise that is broadly comparable.

5.2 What will the variable costs be?

Variable costs are likely to include one group of costs which vary with the number, length and nature of courses to be developed and one group which vary with the number of students. Those varying with the level of course development will include:

- salaries for consultants and outside writers working on the production of teaching materials (which will vary with the amount of course material to be written);
- broadcasting production and transmission costs (which are likely to vary with the number of broadcasting hours);
- preparation of teaching materials, including the costs of editors and graphic artists (where editing costs, for example, will also vary with the length of the material).

Once these costs are expressed in terms of an annual budget, the life of a course affects its cost and it may be necessary to include an element for the revision of courses between the dates at which they are rewritten.

Costs that vary with the number of students will include:

- payment of tutorial staff and associated costs for face-to-face tuition;
- travel;
- production of teaching materials including costs of paper;
- distribution of teaching materials to students (e.g. by post);
- warehousing costs for the storage of materials;
- administrative costs for processing student enrolments and servicing students as they work through their courses.

The first of these elements is slightly more complicated: the costs of tutorial support vary not

only with the number of students but also with the choice of teaching method. If, for example, students are required to attend regular practical sessions, which require generous staffing ratios, then the tutorial cost per student will be higher than it is if they merely have the option to attend an occasional, and less generously staffed, tutorial session.

5.3 How can the budget be calculated?

Once the items that make up the fixed and variable costs have been identified it is possible to begin calculating a budget. The start-up budget is likely to have three elements: capital costs; recurrent costs that can be regarded as fixed; and variable costs. Some parts of this will be straightforward: calculating a budget for salaries or for rent will be little different from doing so for other enterprises.

It is, however, more difficult to calculate a budget for the production of materials. This part of the total budget is of crucial importance: a distance-education programme needs investment in course development before any students are enrolled in something of the same way as a conventional college needs advance investment in lecture theatres and classrooms. In order to calculate a budget for materials it is necessary to make assumptions about the cost of course development and production, the size of the student body and the number of courses to be developed. To work out the cost of developing materials it is then necessary to estimate how much academic staff time is required for a given amount of teaching material: there is no magic formula which states that a given number of writing hours are needed for each student learning hour. One set of calculations, produced by the Briggs committee that was drawing up plans for The Commonwealth of Learning, appears in box 5 to illustrate the process of estimating staff costs for course development. Further calculations would be needed to estimate costs for the production and distribution of print,

Box 5: Material development costs

There is no standard market rate for acquiring course materials, and development costs for them vary widely between institutions and even within any one institution: the costs for two degree level courses, demanding similar amounts of work from students, can differ by a factor of ten at a single institution.

The following assumptions have been made in order to have a basis for calculation.

(a) A degree will consist of 32 units, each of which would require about 100 hours of study time on the part of the student. (While much of the work may not be for degrees, this provides a convenient working unit.) Each of these units would thus be about the equivalent of one quarter of the British Open University course unit.

(b) Academic staff, generally on secondment to the institution, will do some course writing themselves but also commission materials that are developed by consultants.

(c) In a working year a team of three academic staff members could each write two units and commission and supervise the production of eight units, so that the team would between them arrange the production of 30 units.

(d) Outside consultants will require a fee of £4000 per unit.

(e) Editing and master preparation costs will equal academic staff costs.

(f) Academic salary costs can be estimated at £25 000 p.a. including social security etc. and allowing for some course development work by departmental heads and assistant heads.

On these assumptions the team of three would, in a year, incur the following costs in order to produce 30 units:

Salaries:	3 x 25 000 =	75 000
Commissioning fees	3 x 8 x 4000 =	96 000
Editorial etc. costs @ 100%	=	171 000
		342 000

This would give a cost per unit of £11 400 or a cost per complete degree course of £364 800 or, say, £365 000. Printing and production costs, which would vary with the size of the demand for the course, would be additional to this. This figure is not out of line with such development costs as have been reported.

In addition to the costs of initial course development, there will be costs for course maintenance at, say, 20% of the development costs per annum.

Costs for acquiring courses, or acquiring rights to their use are likely to vary with the number of students following them but, as a rough rule of thumb, it has been assumed that a course can be acquired for one-third of the cost of developing one.

Expert Group on Commonwealth Co-operation in Distance Education and Open Learning 1987, pp 81-3

broadcasts, and any audiovisual materials. Local experience in government, or in educational bodies, or in business is the best guide. A similar exercise is needed in order to estimate the cost of tutorial support, which will depend on the number of students, policy decisions about the amount of tutorial support to be provided, and the rate of pay for tutors.

The budgets of existing distance-teaching institutions vary widely in the proportion of their expenditure devoted to different activities and to different media. As the technology of print, and of audiovisual media, is changing rapidly it is impossible to set down hard and fast rules about the comparative costs of different media beyond a limited number of generalisations. Television has higher production and transmission costs than radio and these may differ by a factor of ten or more. Historically print has shown economies of scale which were marked as the print run rose above about 1000 copies but changes in technology are reducing the significance of this. Radio distribution costs tend to be lower than those for audiocassettes but for small audiences cassettes may prove more economic. Whereas economies of scale may be realised for mass media, such economies are not possible for face-to-face tutorials where costs rise in line with the number of students.

5.4 How will the costs compare with those of conventional education?

We are likely to be concerned with two related questions here: asking whether distance education is cheaper or dearer than conventional education and also how the patterns of cost vary between the two systems. While there are inherent difficulties in making such comparisons a small number of studies yield two conclusions on the cost of producing graduates at a distance. First, while graduation rates for distance-education programmes are generally lower than those for conventional education, both large and small-scale projects suggest that one can achieve graduation rates of between 40 and 60 per cent in tertiary education. Higher success rates have been achieved in a number of vocational programmes, and programmes of continuing professional education. Teacher training courses where students are guaranteed qualified teacher status at the end of their course and MBA courses which markedly enhance students' job prospects show high success rates. Second, both large and small-scale programmes have found that it may be possible to produce graduates at a cost of between half and two-thirds of the cost for students at a conventional institution, but more dramatic savings than these do not appear to have been reported (cf. Perraton 1986).

While many governments have been attracted to distance education by this prospect of its cutting costs, there is no particular reason why it should be expected to do so. An alternative approach that might yield benefits in terms of quality and equity would be to allocate the same resources for each full-time equivalent student regardless of the method of study, or to fund institutions in proportion to their likely production of graduates. There is some experience in Australia of funding distance education within a bimodal institution in such a way that the costs for on and off-campus teaching, per full-time equivalent student, are virtually the same.

Whether a particular programme compares favourably with a conventional alternative or not, some generalisations are possible about the structure of costs which is different from that for conventional institutions. It may be possible to reap economies of scale that are not possible conventionally. Where distance education has low variable costs then, even with relatively high fixed costs in the form of investment in course material, the more students we have the lower the cost per student. (The cost curve flattens off, however, as enrolments reach a level beyond which there are no further significant economies.) Economies may be possible where distance education enables greater use to be made of existing facilities, such as university premises in the vacation, thus also increasing the return on a national capital investment. Costs per successful student may, however, show a quite different picture from costs per student as distance education, like other forms of part-time education, tends to have lower success rates than conventional full-time education. Thus a programme may look a remarkable economic success if we ask about the cost per student and quite different if we look instead at the cost per successful student.

While these conclusions are fairly robust, it is necessary to recognise the difficulty of making the comparisons on which they rest. There are four major problems in doing so. First, comparisons relating costs and effects would be fairly straightforward if we had matched groups of students studying at a distance and studying conventionally. In practice, audiences using different methods of study often differ in other respects as well. Second, distance-education students often follow courses with a different structure from those in conventional institutions. Where a distance-teaching institution uses a course-credit system but its neighbour does not, comparison between the two is difficult. Third, while it is convenient to talk generally about distance-teaching institutions, there are wide differences between them and between their teaching methods. As the cost of a distance-education programme is, in part, a function of its choice of teaching media, so it may be misleading to lump together evidence from quite different programmes. Fourth, if we want to compare costs and effects, or to assess benefits, we may want to do so from the standpoint of society in general, rather than from that of any one institution. This will force us to consider costs that may not be reflected in an institution's budget, such as the costs of radio transmissions where these are met by a broadcasting authority, to consider the opportunity cost of students' time, and to consider the intangible social benefits of having part-time educational opportunities available to the public.

5.5 How can it be funded?

Programmes of distance education have generally been funded from four sources: grants or loans,

government funds, student fees, and payment by employers.

Both public and private institutions have provided start-up funds for distance education or support for existing distance-teaching institutions. Major international foundations, for example, have provided funding for distance education in both developing and industrialised countries. The World Bank has funded the building of headquarters for distance-teaching institutions in Africa while the Asian Development Bank has expressed interest in funding new distance-education programmes.

Many distance-teaching institutions, however, rely on government funding for their normal recurrent expenditure and for much of their capital expenditure.

Policy on student fees varies widely from country to country and policy within any one country may differ for full-time and for part-time students. As a result, some institutions draw a significant proportion of their income from these fees, and a lower proportion from government, while others charge nominal fees to students or, in the case of inservice training for teachers for example, may charge no fees at all. Where a high proportion of costs are met from student fees this may discourage enrolment; alternatively student support services may be deliberately limited in an attempt to keep down the cost. In practice many institutions have sought a balance between income from student fees and from government grants. The Indira Gandhi National Open University, for example, draws about 80 per cent of its funds from government and 20 per cent from student fees.

To a modest extent employers have funded distance education. In Britain, the government-backed Open College runs programmes of vocational education and expects the greater part of the cost to fall on employers. Courses of teacher education have been widely funded by ministries of education out of a budget for staff development. Funding of this kind may be expected to grow but is more likely to meet the cost of vocational education, of direct interest to employers, than of general education, or of education that may lead an employee to a different kind of job or to a different employer.

Summary

In order to prepare a budget for distance education it is useful to look separately at the need for capital investment, at staffing costs for the central administration, and at variable costs that will vary, particularly with the number of students and the number of courses.

While there are difficulties in comparing the costs of conventional and distance education, some distance-education programmes have achieved satisfactory graduation rates and done so at a cost per graduate of between a half and two-thirds the rate of conventional institutions.

Distance-education programmes have been funded by grants and loans, regular government funding, student fees, and payments from employers.

6: How do you set it up?

Once a political decision has been taken to look into the establishment of a distance-teaching institution, or to establish one, it is necessary to draw up plans which are at a finer level of detail than the discussion in this book. In some cases governments have decided to establish a new institution after the minimum of preliminary study and paper work. In others, lengthy documents have addressed the broad policy issues discussed here and gone beyond them. Once broad policy has been agreed, there is a further set of issues which determine the agenda for a planning committee or whatever other group is responsible for moving from policy to implementation. Although the distinction is somewhat arbitrary it is convenient to consider separately what needs to be done in the planning phase before an institution is formally established and what follows in a development phase when funds are committed and the first staff identified.

6.1 Who should do the planning?
Governments and universities have often found it useful to set up a planning committee in order to develop an outline plan for a new distance-teaching institution. This has not always been done. In some cases a university has simply agreed that an individual department should launch a programme of distance education and left the planning to that department. In others an educational charity has launched a new distance-teaching institution as an extension of its existing activities. But there are often merits in bringing together a group of people, who combine prestige and expert knowledge, in order to draw up outline plans. Such a committee may report to government, or to a university, or to a body of trustees.

Any planning committee is likely to have a role which goes beyond the technical one of examining the demand for distance education and the ways in which this can be met.

> In the distance teaching university planning process, the appointment of a *prestigious* Planning Committee is a key event. The appointment of the Committee signifies and underlines the Government's intention to proceed. Moreover, when the membership of the Planning Committee comprises eminent and respected academicians and educationalists, their recommendations cannot easily be dismissed.
>
> *Dodd and Rumble 1984, p.241*

While the size and membership of a planning committee will depend on local circumstances, there are obvious advantages in ensuring that it represents some of the groups who will be affected by the establishment of a new institution, which may include other educational bodies, employers and trade unions, and broadcasting authorities. Some governments have brought on to their committees members or consultants from another country with specialist knowledge of existing distance-teaching institutions.

6.2 What needs to be done in the planning phase?
In the planning phase it will be necessary to examine the broad goals to be met by a new institution, the educational activities that flow from them, constitutional and organisational ways of meeting them, finance, staffing and the phasing of development.

6.2.1 Goals and purpose
Taking account of earlier decisions about the broad purpose of a new institution, it will often be necessary to carry out further enquiries into the nature of the educational needs to be met and the characteristics of the potential students.

6.2.2 Educational activities
From this consideration of educational needs it is possible to make preliminary decisions about the kind of courses to be offered, and in some cases about the course structure. At this stage, too, decisions are needed about the teaching methods to be adopted and about how teaching materials are to be developed.

6.2.3 Constitution
Planning committees have usually resolved questions about the constitutional status of a new institution and drawn up the necessary constitution, charter or legislation within which it will operate. At this stage it is necessary to resolve questions about the power of a new institution to award credit in the form of diplomas and degrees.

6.2.4 Organisation
The organisational structure needs to take account both of the constitution and of the teaching methods that will be used. It will be necessary to resolve questions about the extent to which the new institution should be centralised, about the development of any regional structure and about the way in which it will relate to other educational bodies. Operational systems will need to be designed for the production, storage and distribution of teaching materials and for enrolling and supporting students.

6.2.5 Finance
There are three financial issues to be considered. The first is to determine the sources of funding and the balance between them (see para. 5.5 above). The second is the budget, which probably needs to be determined in some detail for the first two to three years and in outline for the first five years. The third is the

system that will be used for financial management and control.

6.2.6 Staffing
Decisions about the purpose and structure of the institution lead on to ones about staffing. Planning committees have often continued their work as far as the appointment of the head of a new institution. They are, in any case, likely to agree the job description and terms of service for such a person.

6.2.7 Phasing
A key component in the planning phase is the timetable of activities to launch the new institution. At the least, the timetable needs to set out the stages from the completion of the work of any planning group until students are enrolled. At most it may extend from the beginning of the planning phase until the institution has reached steady state.

Box 6 summarises experience from a number of planning committees.

6.3 What staff will you need?
Decisions about staffing will depend on the educational job to be done and the organisational model chosen. Among its full and part-time staff, a distance-teaching institution may need:

Box 6: Planning committees

The Characteristics of DTU [Distance Teaching University] Planning Committees: Summary of Main Points

In the DTU planning process, the appointment of a prestigious Planning Committee has been a key event.

Planning Committee membership numbers have ranged from three to nineteen persons. The membership has rarely included public broadcasting representation [although this is often advisable].

The timescales within which Planning Committee have operated have ranged from three months to several years.

Interim reports issued by the Planning Committee have served not only to test opinion on the Committee's initial proposals but also to safeguard the DTU planning initiative.

Representatives of DTU Planning Committees have commonly travelled overseas on fact-finding visits to other DTU institutions . . .

DTU planning and development has been stimulated and promoted by national and international aid agencies, by intergovernmental aid agreements, and by DTU institutions . . . providing overseas consultancy services.

Continuity in the membership of the Planning Committee and the new DTU's highest policy making bodies has been a common feature.

. . .

The Content of DTU Planning Committee Reports

The main issues which the Reports . . . have addressed are these:

1. Shortfalls in the national provision of higher and further education opportunities.
2. The potential of distance education as a solution to (1).
3. Distance education practice and experience nationally and internationally.
4. The new DTU proposed by the Planning Committee:
   - (i) Institutional objects;
   - (ii) The target audience;
   - (iii) Study programmes and awards;
   - (iv) Admission criteria;
   - (v) Study methods, media, timescales;
   - (vi) Local student support;
   - (vii) Institutional organisation and administration;
   - (viii) Institutional staffing;
   - (ix) Finance;
   - (x) Relationship with other institutions;
   - (xi) Proposed start date.

Dodd and Rumble 1984, pp 249-252

Educational staff
subject specialists
specialists in the production of materials
specialists on tutoring and counselling
tutors (especially part-time tutors)
broadcasting producers
research workers and evaluators

Materials production staff
printers
copy editors
graphic designers
broadcasting technicians
typists, typesetters, calligraphers

Administrative staff
administrators and managers
personnel staff
financial staff
clerks
secretaries and typists
messengers, janitors, drivers.

Many, but not all of these, will be in the headquarters office. Where, however, staff are decentralised they are likely to require the appointment of co-ordinators within the headquarters. A tutorial service in the field, for example, is likely to demand the establishment of a unit to co-ordinate and supervise field activities from the headquarters.

Arrangements will also be necessary for the training of staff which may be done on the job, by means of short courses at the institution, by sending students on full or part-time courses, or by enrolling them in an appropriate course taught at a distance. The choice of organisational model will influence the training strategy. Within a bimodal institution, for example, where a course writer is combining that role with one of teaching face-to-face courses, sensitivity is needed in arranging courses for experienced university teachers on the writing of teaching materials, and these need to be timed so that they fit with the writer's other commitments.

6.4 What is left for the development phase?

Decisions taken in the planning phase may carry authority while those taken by the permanent staff in the development phase will be marked by a realism and commitment: the decision-makers will have to live with their consequences. To a great extent this next set of decisions will be an elaboration of those taken before and during the planning phase. In order to allow for continuity, many institutions have arranged for members of a planning committee to continue as board members or advisers once the institution moves into the development phase.

The recruitment and training of staff will be a priority in this phase. If job descriptions, terms of service and salary scales have not been agreed in the previous phase this will need to be done for both full-time and part-time staff, as will arrangements for staff training and development.

Once staff are in post, work can begin on the development or acquisition of educational materials, coupled with the necessary work on curriculum development and teaching methods and on the establishment of the institution's administrative structure and procedures. Trade-offs may be needed between educational and administrative pressures: academic policy will be influenced by what is administratively feasible. At this phase, too, the new institution will need to elaborate and put in place its operational systems.

6.5 How long will it take?

It is dangerous to be dogmatic about the length of this, as of the previous, phase. On the one hand it is risky to start a programme until all its elements are in place, tested and working. On the other, there is often a political commitment to launch a new institution and recruit students at the earliest possible date. It may be possible to resolve this dilemma by launching a small number of courses, for limited numbers of students, on a pilot basis. Hazards remain of course: some of the problems of distance education are ones of scale that do not show up in a pilot while, on the other hand, the commitment that leads to the establishment of a pilot is often so strong that any pilot results are acclaimed a success.

Some large and well-funded institutions have found it possible to launch pilot courses within little more than a year from the appointment of the first senior staff. Others have moved to a fairly full programme within about two years. Shorter time scales than this are likely to have attendant risks as the processes of establishing an administration, and of developing or adapting teaching materials are necessarily complex and often novel for at least some of the staff who undertake them.

The moral, which is easier to preach than to achieve, may be to seek a phased development, bold and imaginative enough to command continuing public and political support, modest and careful enough to maximise the chances of success.

Summary

The detailed planning of a new distance-teaching institution has often been the responsibility of a planning committee which is at its most effective if it combines prestige and expert knowledge.

Plans generally need to consider the goals and purposes of the proposed institution, its educational activities, a possible constitution, its organisation, finance, staffing and phasing.

While the staff structure will depend on the organisational model chosen, a distance-teaching institution is likely to need staff with skills in education, in materials production and in administration, some of whom may work in a central location but some of whom may be decentralised.

In the development phase it is then necessary to recruit staff, work on the detail of educational programmes, and put in place the structures outlined at the planning stage.

Pressures to start a new institution quickly may be met by running pilot activities but a lead time of about two years is likely to be needed between the appointment of senior staff and the launching of regular programmes.

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Printed by the Commonwealth Secretariat and published jointly by the Commonwealth Secretariat and The Commonwealth of Learning

May be purchased from
Commonwealth Secretariat Publications
Marlborough House
Pall Mall
London SW1Y 5HX
England

ISBN 0 85092 [illegible]

Price £ [illegible] surface £ [illegible] airmail

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